

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A reactor for preparing chlorine from hydrogen chloride by gas-phase oxidation with oxygen in the presence of a heterogeneous catalyst comprising [[in]] a fluidized bed [[(2)]], with gas-permeable plates [[(17)]] being located in the fluidized bed [[(2)]] transverse to the flow direction of gas through the fluidized bed, wherein the gas-permeable plates [[(17)]] are connected in a thermally conductive manner to a heat exchanger [[(9)]] located in the fluidized bed [[(2)]], and wherein the thermal conductivity of the gas-permeable plates [[(17)]] is greater than the thermal conductivity of the fluidized bed [[(2)]].

Claim 2 (Currently Amended): A reactor according to claim 1, wherein the heat exchanger [[(9)]] has tubes [[(16)]] which run horizontally in the fluidized bed and are connected to the gas-permeable plates [[(17)]].

Claim 3 (Currently Amended): A reactor according to claim 2, wherein the horizontal tubes [[(16)]] connect vertical heat exchanger tubes [[(15)]] of a shell-and-tube heat exchanger [[(9)]].

Claim 4 (Currently Amended): A reactor according to claim 1, wherein the gas-permeable plates [[(17)]] connect vertical plates of a plate heat exchanger to one another.

Claim 5 (Currently Amended): A reactor according to claim 1, wherein channels or tubes through which a heat transfer medium flows run through the gas-permeable plates [[(17)]].

Claim 6 (Currently Amended): A reactor according to claim 1, wherein perforated plates are used as gas-permeable plates [[(17)]].

Claim 7 (Previously Presented): A reactor according claim 1, wherein ordered or unordered mesh structures are used as gas-permeable plates.

Claim 8 (Currently Amended): A reactor according to claim 1, ~~wherein the hydrogen chloride and the oxygen are introduced into the fluidized bed through a~~ which additionally comprises a windbox [[(3)]] and a gas distributor [[(4)]] adapted for introducing hydrogen chloride and oxygen into the fluidized bed.

Claim 9 (Currently Amended): A reactor according to claim 8, wherein at least one perforated plate is used as gas distributor [[(4)]].

Claim 10 (Currently Amended): A reactor according to claim 8, wherein at least one plate provided with gas distributor nozzles is used as gas distributor [[(4)]].

Claim 11 (Currently Amended): A reactor according to claim 8, wherein an impingement device is located in the windbox [[(3)]] above [[the]] a gas inflow opening.

Claim 12 (Original): A reactor according to claim 11, wherein the impingement device is a flat, round-domed or funnel-shaped metal sheet arranged transverse to the inflow direction.

Claim 13 (Currently Amended): A reactor according to claim 1, wherein a granular fluidized-bed material comprising the heterogeneous catalyst is used to form the fluidized bed [[(2)]].

Claim 14 (Currently Amended): A reactor according to claim [[1]] 8, wherein the interior walls of the reactor [[(21)]], gas-permeable plates [[(17)]], heat exchanger surfaces, interior walls of the windbox [[(3)]] and the gas distributor [[(4)]] are made of steel or nickel alloys.

Claim 15 (Currently Amended): A reactor according to claim [[1]] 8, wherein the gas distributor [[(4)]] is made of a ceramic material.

Claim 16 (Currently Amended): A process for preparing chlorine from hydrogen chloride by gas-phase oxidation with oxygen using comprising feeding hydrogen chloride and oxygen to a reactor, carrying out said gas-phase oxidation in the reactor, and removing chlorine from the reactor, wherein the reactor is a reactor according to claim 1.

Claim 17 (New): A reactor according to claim 1, wherein the interior walls of the reactor, gas-permeable plates, and heat exchanger surfaces are made of steel or nickel alloys.

Claim 18 (New): A reactor according to claim 1, wherein the gas-permeable plates have individual openings in the range of 10 to 1000 mm².

Claim 19 (New): A reactor according to claim 1, wherein the gas-permeable plates have a spacing of from 20 to 50 cm.